SANTA CRUZ BIOTECHNOLOGY, INC.

SF2/ASF (96): sc-33652

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pre-mRNA splicing enhancer elements are short RNA sequences capable of activating weak splice sites in nearby introns that are required for accurate splice site recognition and the control of alternative splicing. Splicing enhancer elements contain specific binding sites for serine/arginine (SR)-rich splicing factors, which include SC35, 9G8, SRp20 and SF2/ASF. The family of SR factors all contain one or more RNA recognition motifs (RRM) and an arginine/serine (RS)-rich domain. They are not only essential for constitutive splicing but also regulate splicing in a concentration-dependent manner by influencing the selection of alternative splice sites. The majority of SR proteins, including SC35 and SRp40, are confined to the nucleus, while SF2/ASF, SRp20 and 9G8 are continuously shuttled between the nucleus and the cytoplasm and contribute to mRNA transport. The activity of SR proteins in regulated splicing is antagonized by members of the hnRNP A/B family of proteins, which induce drastic shifts in the selection of splicing sites. An additional SR-associated protein, p32, tightly associates with SR factors and preferentially inhibits ASF/SF2 functioning as both a splicing enhancer and splicing repressor protein by preventing the stable interaction of ASF/SF2 and RNA.

CHROMOSOMAL LOCATION

Genetic locus: SRSF1 (human) mapping to 17q22; Sfrs1 (mouse) mapping to 11 C.

SOURCE

SF2/ASF (96) is a mouse monoclonal antibody epitope mapping near the N-terminus of the SF2/ASF protein consisting of the RRM1 region.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SF2/ASF (96) is available conjugated to agarose (sc-33652 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33652 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33652 PE), fluorescein (sc-33652 FITC), Alexa Fluor® 488 (sc-33652 AF488), Alexa Fluor® 546 (sc-33652 AF546), Alexa Fluor® 594 (sc-33652 AF594) or Alexa Fluor® 647 (sc-33652 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33652 AF680) or Alexa Fluor® 790 (sc-33652 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SF2/ASF (96) is recommended for detection of SF2 and ASF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

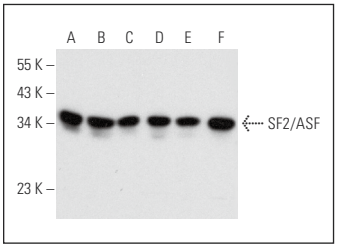
Suitable for use as control antibody for SF2/ASF siRNA (h): sc-38319, SF2/ASF siRNA (m): sc-38320, SF2/ASF shRNA Plasmid (h): sc-38319-SH, SF2/ASF shRNA Plasmid (m): sc-38320-SH, SF2/ASF shRNA (h) Lentiviral Particles: sc-38319-V and SF2/ASF shRNA (m) Lentiviral Particles: sc-38320-V.

Molecular Weight of SF2/ASF: 32 kDa.

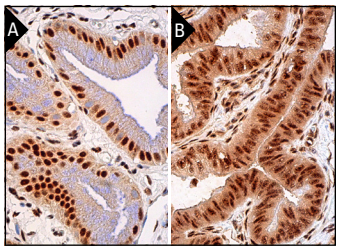
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



SF2/ASF (96): sc-33652. Western blot analysis of SF2/ASF expression in Jurkat (**A**), A-431 (**B**), LADMAC (**C**), F9 (**D**), C6 (**E**) and H19-7/IGF-IR (**F**) whole cell lysates.



SF2/ASF (96): sc-33652. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing nuclear and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Boukakis, G., et al. 2010. Deregulated expression of hnRNP A/B proteins in human non-small cell lung cancer: parallel assessment of protein and mRNA levels in paired tumour/non-tumour tissues. BMC Cancer 10: 434.
2. Zou, L., et al. 2012. Correlation of SRSF1 and PRMT1 expression with clinical status of pediatric acute lymphoblastic leukemia. J. Hematol. Oncol. 5: 42.
3. Chettouh, H., et al. 2013. Mitogenic Insulin receptor-A is overexpressed in human hepatocellular carcinoma due to EGFR-mediated dysregulation of RNA splicing factors. Cancer Res. 73: 3974-3986.
4. Gammons, M.V., et al. 2014. Targeting SRPK1 to control VEGF-mediated tumour angiogenesis in metastatic melanoma. Br. J. Cancer 111: 477-485.
5. Calabretta, S., et al. 2015. Modulation of PKM alternative splicing by PTBP1 promotes gemcitabine resistance in pancreatic cancer cells. Oncogene 35: 2031-2039.
6. Balbinot, C., et al. 2017. Fine-tuning and autoregulation of the intestinal determinant and tumor suppressor homeobox gene CDX2 by alternative splicing. Cell Death Differ. 24: 2173-2186.
7. Howard, J.M., et al. 2018. HNRNPA1 promotes recognition of splice site decoys by U2AF2 *in vivo*. Genome Res. 28: 689-698.
8. Zhou, X., et al. 2019. Splicing factor SRSF1 promotes gliomagenesis via oncogenic splice-switching of MYO1B. J. Clin. Invest. 129: 676-693.
9. Chen, Z.H., et al. 2020. Nuclear export of chimeric mRNAs depends on an lncRNA-triggered autoregulatory loop in blood malignancies. Cell Death Dis. 11: 566.

RESEARCH USE

For research use only, not for use in diagnostic procedures.